Chapter 1
What is Language, and How is it Learnt?

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Language and Communication

All members of the animal kingdom communicate. When an individual member of a species communicates, it demonstrates behaviour that affects the behaviour of another. Specifically, it involves an exchange of information.

The means of communication are varied and wonderful in the animal kingdom. A honey-bee does an intricate 'dance' which signals the whereabouts of nectar. Species of ants secrete a chemical from their abdomen which mark trails for other ants to follow. Single-celled entities such as paramecium secrete chemicals in order to locate a mate. Certain types of fish exude an electric current.

Sound, of course, is a feature of the communication systems of many creatures besides ourselves. Birds learn intricate patterns of pitch variation early in life, which we classify as song. We also label as song the haunting noises that whales make to communicate over great distances. Dolphins, their smaller relatives, make patterns of noises, which are used in an elaborate echo-location system. (In fact the size and structure of a dolphin's brain suggests to scientists that these creatures may have a capacity for language and reasoning parallel, but of a different order, to that of humankind.)

The variety of signals used by most living creatures, whether sonic, visual, or chemical, provides information which helps co-ordinate activity between two or more members of a species. This information may be about the age, sex, location, or breeding condition of the sender; or it may be about the presence of food or predators, or the conditions of the external environment. The signals used are vital for procreation and survival, and for most creatures are limited to these immediate concerns.

Humankind uses a variety of communication systems, but the prime medium is sound. We use a system whereby messages are constructed via speech apparatus, an articulation system more elaborate than any other creature. The brain co-ordinates tongue, teeth, lips, the inside of the mouth, and vocal chords to produce discrete sounds or *phonemes* (see Chapters 5 and 6) that combine to form distinctive units of meaning, which are then received by the ear apparatus of another and processed. Communication takes place if the way these sounds are combined is familiar to the hearer. This is the primary meaning of "language", a term which derives from the Latin *lingua* (tongue).

What really distinguishes this specifically human system from the systems of other creatures is its duality of structure. The sound or *phonological* part is one aspect of this. The other part is its creativity, or open-endedness. Speakers of a common language can produce and understand a large number of sentences never before uttered. They can recombine sounds, representing ideas, infinitely according to certain rules. It is this rule system which makes it possible for others to understand the message.

The ideas expressed in human language are not limited to immediate environmental concerns, as is the case with the kinds of animal communication systems outlined above. Language can convey information about matters far removed in space or time. Language makes abstract thinking and reasoning possible. Furthermore, since the development of writing systems, or ways of representing sounds visually so as to record information, human languages have enabled information to be shared and activity to be co-ordinated on a large scale and over time. Language creates and shapes the society we live in.

The Birth of Modern Linguistics

The advent of written language made many things possible, including scholarship and the study of language itself. Traditions of linguistic thought established during the Greek and Roman periods influenced the western world from the Renaissance period until the late nineteenth century. Latin and Ancient Greek were the official languages of the Christian Church, from the Byzantine period onwards. These tongues maintained their status long after they had ceased to be spoken as everyday languages, giving the churches a monopoly over scholarship. The written form of languages was emphasised for study purposes. Extinct languages were seen as "pure", and modern vernaculars were somehow degenerative forms. Even when modern languages such as French had established written literatures, they were analysed according to the precepts of these old languages, which were in fact quite different structurally. Thus a *prescriptive* attitude to language was often prevalent in traditional education, as exemplified in old grammar books which remonstrate against split infinitives such as *to boldly go,* or favour structures such as *It is I* over *It's me*, ignoring common usage. This view of language did not take into account the change of language over time, and the fact that language is primarily spoken; the written form follows.

The modern study of language really began with Ferdinand de Saussure, (1857-1913) a professor of linguistics in Geneva. Saussure concluded that language was a *semiotic* system, or a system of signs. Words, sounds or any things that have meaning are signs. The sign unites a concept in the human mind to a sound or visual image. Saussure distinguished between the *signifier* and the *signified*. As an example, the written or spoken word 'tree' in English or '*arbre*' in French is the *signifier*, while the concept of the tree in our minds to which we attach the sound or letters, is the *signified*. (The word *symbol* has sometimes been used in this context, but is not accurate because symbols are often more closely related to the concept they denote. An example of a *symbol* would be the image of scales or balances to represent justice.) On the other hand, Saussure noted that the relationship between signifier and signified is an *arbitrary* one. There is no necessary connection between the signified and the signifier, no logical reason why the concept of 'tree' should be denoted by the letters t-r-e-e. In fact, it doesn't matter whether people call something *tree* or *flower* or any combination of sounds or letters as long as speaker and listener both agree on what is being talked about. This is obvious from the fact that there are different signifiers for particular concepts in different languages.

Some have attempted to describe a more concrete relationship between sound and meaning, citing examples of onomatopoeia. However, such attempts are discounted by Saussure because (a) examples are very few; and (b) many formations are not onomatopeic in derivation, but have acquired such a feature through time. One example is the French word *fouet* (whip) which may

recall the sound of a whip swishing through the air, but in fact derives from Latin *fagus* (beech-tree).

However, using language is not simply a naming process, which would imply that ready-made ideas exist before words. In fact, in Saussure's example, the actual living *tree* is not an intrinsic part of the relationship. The meaning is not derived from the thing itself, but from the *system* of signs. We impute meaning to a sign because of its difference to other signs in our signifying system, or language. A tree may be defined as a living thing that is not an animal, or a living thing that grows from the ground, or is living and largely composed of wood. So the meaning of the sign *tree* is derived from other signs.

While individual signs may be considered to be arbitrary, language systems are not; they are products of the societies that use them. Convention and use produce meaning, and different languages carve up concepts in different ways.

The idea of a socially-constructed network of signifiers has important implications for the relationship between language and ideology. Ideology can be seen as practices of signifying, through discourse, or by how things are represented and accepted by members of a speech community. Language usage shapes or even possibly controls thought. George Orwell gave an analogy of the power of language in *1984,* his novel of a grim totalitarian future. In this story the government creates a new language termed *Newspeak*, which attempted to limit concepts able to be expressed by members of society. By reducing the options for available signs, certain concepts such as anti-party sentiment could be rendered impossible to express. This idea is not so extreme when the propaganda techniques of any society are considered. American Military usage in particular seeks to reframe unpalatable concepts, by using terms such as *air support* for bombing campaigns. Other examples include *friendly fire* and *collateral damage*.

Saussure argued there was a significant difference between speech and writing. In writing, meaning is connected to the reader rather than the author. There is no author actually present to impart meaning; the only meanings that exist are those the reader gives to a text by interpretation. This facet of writing can be illustrated by examining the ways in which political or religious organisations variously interpret texts of importance to them. Both writing and speaking, however, can be considered to be "linear" (although cf. Chapter 7) in that a string of meaning begins at a point and progresses in a straightforward direction.

Two perspectives on living languages are drawn by Saussure for linguistic study purposes. There is the *synchronic* relationship, the way a language is composed "now", a "freeze-frame" of its meaning relationships; and a *diachronic* one*,* which represents the historical evolution of a language, such as the gradual change of Latin into French, Spanish, and other Romance languages. With these viewpoints Saussure showed that language functions as a complete system at any given point in time. He referred to this system, the overall set of rules for a language, as *langue,* and used the term *parole* for particular instances of language use. This distinction paved the way for the descriptive linguistic studies of the mid- to late twentieth century.

Chomsky and Theoretical Linguistics

The early twentieth century saw the development of structural linguistics, inspired in particular by the scholar Leonard Bloomfeld (1887 – 1949). Bloomfeld's work transformed the study of language into an empirical and scientific discipline, which paralleled developments in other

humanistic fields such as psychology. Language was seen as a facet of human behaviour, and the observation of differences in behaviour, such as the differences between human languages, would contribute to human self-understanding. Attention was turned to the codification and description of natural spoken languages, in particular ones which were dying out, such as indigenous native American languages, some of which had few remaining speakers. 'Bloomfeldian' linguistics was characterised by scientific rigour and objectivity; the linguist's task was to discover the unique grammatical *structure* of a language, and render a description of it.

In the field of psychology, the school of Behaviorism, founded by J.B.Watson, fuelled much of the theory for the structural approach to linguistics. In the mid 1950's a student of Watson's, B.F.Skinner, argued that only observable language was relevant for study purposes, and that human language was behaviour like any other, a response to a stimuli presented by features of the environment. In this theory, what someone would say could be predicted if specific environmental effects on an individual were exactly understood. Skinner proposed that language is best learned through imitation and reinforcement, a view which influenced the "audio-lingual" (cf. Chapter 11) approach to language learning, in which language is broken down into small units of stimulus-response links and practised in oral repetition drills. Errors made while learning a second language were seen as old habits getting in the way of new habits, or more specifically, a learner's mother tongue interfering with the production of the language being learned.

Linguistics, then, had become a science, empirical and objective, although Bloomfeld himself recognised that meaning was being neglected. Thirty years later, in 1957, Noam Chomsky published his watershed *Syntactic Structures*. Although coming from the Bloomfeldian school himself, Chomsky rejected Behaviourist principles. He reviewed Skinner's work *Verbal Behaviour* in an exhaustive dissection of Behaviourist claims, attacking the view that an empirical approach could construct a science of the mind (Chomsky 1959). Chomsky argued that the structuralist approach could not account for creativity in language. He illustrated the importance of meaning in the phrase *Colourless green dreams sleep furiously,* demonstrating how syntactically well-formed utterances could be devoid of sense. He also pointed out that many utterances are 'one-offs', never to be uttered again, and that children until the age of puberty could learn any language they were exposed to on a regular basis, without effort. This led him to propose a "Universal Grammar" as a feature of all human languages, and that all humans had a "Language Acquisition Device" (LAD) in the brain, which was part of human biological make-up. Universal Grammar principles would generate only and all the possible sentences of a specific language, which are acceptable to a native speaker. Chomsky referred to a native-speaker's overall ability to use a mother tongue as *competence*, and to individual instances of language use, or output, as *performance*, echoing Saussure's *langue* and *parole.*

Evidence for the existence of the LAD came from studies of children learning their first language. Children hear sentences uttered by their parents and other caretakers, and rapidly become competent users. They pass through a number of stages in their acquisition of a mother tongue; in the case of English they proceed from single word utterances to verb + noun phrases (cf. Chapter 7). The grammatical intuitiveness of children is demonstrated in such observed in features as overgeneralisation. An example of this is that children learning English as a mother tongue routinely form past forms of verbs with the morpheme *–ed*, and initially extend this feature to irregular verbs. Forms such as **comed* and **goed* occur frequently, until children internalise the accepted forms used by adult native speakers. So from the raw material of language, learners hypothesise certain rules, then self-correct after these hypotheses are put to the test. Jean Berko's now-famous WUG test confirmed this phenomenon; in this test, the subject

is given a fictional word in some inflected form, and is asked to provide another inflected form from the same stem. Specifically, Berko presented children with pictures of an unfamiliar, fictional, animal (a "wug") and asked what two of such creatures would be called. Children naturally said 'Wugs', inflecting the form with a plural *-s* even though the item had no meaning for them.

The LAD can be seen as a kind of 'black box'. Language goes in, and comes out, and by observing this an understanding of the process might be reached, which in turn may throw light on the structure of the mind.

With *Syntactic Structures* the discipline of Theoretical Linguistics emerged. Its basic premise was that language rules are categorical, and they are used by an ideal speaker-hearer - as personified by the linguist perhaps. This was a somewhat rigid approach, in which variability was not permitted, in contradiction to the emergent discipline of sociolinguistics, which takes as its premise that language is *inherently* variable.

Chomsky labelled his description of how the language faculty functions as Generative Grammar, which accounts for the production of acceptable utterances in a language. He proposed a sequence of models for generative grammar. The first was Finite State Grammar, in which sentences are generated by a series of 'left to right' choices. For example, a sentence like *That woman comes from Melbourne* might be explained in this way. *That* is chosen in first position from all the possible initial position words in English. *This* is also possible. The selection of words in second position is now limited; if a noun follows, it must be in singular form, or the determiner *that* will change to *those*. Then *woman* limits the selection of possible words to follow, and so on.

Chomsky realised that although this model accounted for many simple structures, it was inadequate for handling more complex constructions in English, involving clauses and phrases embedded within sentences. He therefore proposed a second model: Phrase Structure Grammar. This model accounted for more sentences in English by allowing for elements in a sentence to be grouped together. Noun or Verb Phrases could be considered as linguistic items to be manipulated. This model proved still to be inadequate in accounting for some constructions, and so a third, more powerful model, Transformational Grammar, was proposed. This more complex model accounts for how base or "kernel" sentences can be transformed into, say, negative, interrogative, or active and passive constructions. This model consists of three components. The first is the syntactic or "base" component; syntax and actual words used provide Deep Structure information about sentences, and also give a set of transformational rules which generate Surface Structures, or actual examples. The second element is phonological, the sound rules which enable us to pronounce elements of syntax. Thirdly, the semantic or meaning element, the way meaning can be represented by phonological or syntactical elements, has equal importance.
As an illustration of deep and surface structures, compare the phrase *Would you like* in these two sentences: (a) *Would you like to have dinner?*; and (b) *Would you like to have children?* Example (a) is an invitation, while (b) is an enquiry. The structure *Would you like* has identical surface structure in the two examples, but differs in deep structure. On the other hand in the sentences *Would you mind opening the window* and *Could you please open the window* surface structures differ but deep structure is the same.

Chomsky's interests later shifted to political commentary, but his influence on the field of linguistics has been enormous and has important implications for English language teaching pedagogy.

Interlanguage

The emergence of modern linguistic disciplines has generated various theories of language learning which have in turn influenced the practice of language teaching. Language classrooms have provided the research environment for the development of such theories and a new discipline, Applied Linguistics, has emerged. Its focus is the practicalities of language learning and teaching, or what actually happens in an observable language-learning environment, the classroom. The ideal speaker-hearer gives way to the actual learner and observable behaviour leading to SLA.

What do learners do when they begin to learn a second language? It is obvious, not only to teachers but to a native speaker of any language, that most learners produce ill-formed, ungrammatical sentences. It has been mentioned that from the Behaviourist viewpoint such errors were seen as undesirable behaviour to be corrected, an inevitable sign of human fallibility. A modest teacher might also conclude that errors may also be the result of poor teaching, and thus it is the teacher's behaviour that must be modified. Errors were also thought to be due principally to interference from the first language.

Larry Selinker, in an influential paper first published some thirty years ago, proposed that error was not necessarily an evil to be avoided as much as possible, but was useful evidence of how the learner was actually learning the language. He coined the term "interlanguage" to refer to the developing communication system that learners use (Selinker 1972).

Contemporary research showed that some errors cannot be accounted for by mother-tongue interference. The linguist Pit Corder noted that in an unstructured or non-classroom environment, the interlanguage systems of speakers of different languages resembled one another. Interlanguage, Selinker proposed, is a continuum - a system of a dynamic, changing nature. The basic premise of interlanguage theory is that learners upgrade their language competence by testing hypotheses formed by their processing of new language input, and that they will continue to do so as long as they are motivated. There is a clear parallel with mother-tongue learning here. The motivation factor is important. Selinker noted that *fossilisation* takes place, particularly in adult learners who are no longer motivated (*internal fossilisation)* or who no longer need to upgrade language skills for purposes of communication *(external fossilisation).* Selinker gave the French phoneme guttural /r/ as example of the latter, being a feature which remains unchanged for many adult French learners of English, as it does not impede communication.

It has been theorised that neural structures in the brain restrict the operation of hypothesis-testing after puberty. So if children learn naturally, and after adolescence neural patterns have become 'set in their ways', how do adults learn a second language at all? Selinker addressed this issue, suggesting that adults partly make use of *latent language structure* and partly by using a *latent psychological structure*, a more general 'cognitive organising' faculty in the brain. Put another way, Selinker suggested that there are two possible processes for adult SLA: by taking the route of first language acquisition, or by making use of alternative mechanisms within the brain which may also be used for types of learning other than language learning.

Interlanguage theory has had important implications for second-language teaching. One implication is that efficient language teaching should take into account natural processes; it should adapt to the actual learner, rather than be modelled on an ideal one. Real learners *use* language, and need it for communication. An understanding of this point has reinforced the

Communicative approach to teaching language (see Chapter 11), which has become the dominant English language teaching methodology in the last three decades.

Various studies have been undertaken to research interlanguage systems. Some findings showed that these systems have more properties in common the younger the learners are. They also revealed that the more communicatively oriented the learning setting is, the more similarities the systems will show. If language does have such universal properties, as Chomsky proposed with Universal Grammar, then interlanguage systems are likely to show certain similarities in certain contexts. Evidence to support this is provided by the striking similarities shown in the development of simple codes such as pidgin languages.

Selinker's paper was important in that it gave a theoretical framework for looking at SLA as a mentalistic process, and it opened the door to empirical research into learner language. He pointed out three important features of interlanguage:

(i) Interlanguage is *permeable*. The rules learners internalise are not fixed, but can be adjusted, as learning progresses. This is also a feature of natural languages. Grammatical rule changes are evident in the evolution of Old to Middle English. Word order in Old English resembled that of German, with possible (transliterated) formations as **I have him yesterday seen*, a construction unacceptable in modern English.

(ii) Interlanguage is *dynamic*. It is unstable, being revised constantly, as new hypotheses are tested. One example is *overgeneralisation,* as exemplified earlier in child language forming irregular past tense forms with *–ed*, or producing forms such as *bring, brang*, by analogy with *ring, rang*. O*verextension* also occurs in areas of meaning. A learner might use a word such as *driver* to describe anyone in control of a means of transport, using *plane driver* for pilot.

(iii) Interlanguage is systematic. Despite the variability mentioned above, the development of interlanguage is predictable. Research was carried out to support the claims that, like first language learning, second language learning follows a natural route of development.

This hypothesis of a 'natural route of development' has substantially influenced the order in which language items are presented in course books. There have been methodological problems with research in this area, however. Cross-sectional studies do not give a complete picture of development over time, and longitudinal studies are limited as only small samples can be studied for practical reasons.

Although interlanguage had a major impact on SLA research, the idea of a mental framework is perhaps not the complete picture. Language input also plays an important role. What type of language is taught, how and under what circumstances? Subsequent research has been focusing on issues such as this.

Questions for Discussion

1. Think about how some familiar animals communicate, e.g. household pets. Compare the ways such animals communicate basic needs and/or emotions with how we sometimes use non-verbal cues. Are there any similarities?

2. Consider the statement "Language shapes and creates society". Building on the discussions from the previous question, what aspects of human society could not exist if we relied solely on visual cues and sounds that had no combinatory value?

3. Early studies in linguistics focused on the written language and led to a prescriptive approach in understanding and using grammar. What are the disadvantages of a prescriptive approach for foreign learners of English?

4. Saussure pointed out that the relationship between signifier and signified is arbitrary, and that the meaning of a sign is derived from other signs. If you have studied any other language:
    (a) Think of common words in English and compare their counterparts in other languages;
    (b) Think of words or concepts in another language that do not easily "fit" into an exact English translation. Why might this be the case? (It might be worthwhile having a look at Chapter 8 before you answer this.)

5. Some examples, such as *air support*, have been given here which show how unpalatable concepts can be made more acceptable by using certain terms. Find other examples of this in daily language, such as politician's speeches or the trend towards Politically Correct language. Discuss how such terms may modify the message.

6. Discuss the differences between spoken and written language. Think of the different genres of each (e.g. written: prose, poetry, memos, scripted speeches, and spoken: conversations, orders, commentary).

7. The Diachronic perspective of language takes historical change into account. Syntax has changed since the time of Old English. Some words have changed in meaning from Shakespeare's time. A well-known example is the word *nice*, which used to mean foolish. Even in our own time slang terms have changed nuance. Can you think of any terms which have altered or gained new meanings in your lifetime?

8. If you have studied another language formally, reflect on your own interlanguage. Reflect on the stages you went through. Which aspects of the language were easy and which were difficult? What helped understanding and ability to communicate? Think about such aspects as methodology, the kind of input from the teacher, and the sequence of the language items presented.

Sample Projects

1. Compare features of children's speech (1-4 years old) as they learn their native language with speakers of other languages learning English. To access native-speaking children, you may have relatives with small children, or you may have your own. If not it may be possible to get permission to attend a session at a local kindergarten.

2. Listen to the speech of foreign learners of English, or ask permission to sit in on an English class at a University Language Centre or a private school. Make notes of the language you hear. Pay specific attention to the choice of morphemes and the kinds of syntactic patterns that emerge. Take a global perspective also, making notes on the efficiency of communication, and how that efficiency was (or was not) achieved.

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